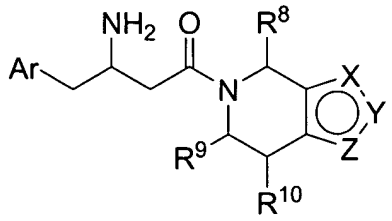
Amendment to the Claims:

Cancel Claim 52.

Add new Claims 53-56.

Listing of Claims:

1. (original) A compound of structural formula I:



(I)

or a pharmaceutically acceptable salt thereof; wherein

each n is independently 0, 1, or 2;

X, Y and Z are independently selected from the group consisting of:

(1) CR^1,

(2) NR^2,

(3) N,

(4) O, and

(5) S;

with the provisos that at least one of X, Y and Z is not CR^1 and two of X, Y, and Z cannot be O and/or S;

Ar is phenyl substituted with one to five R^3 substituents;

each R^1 is independently selected from the group consisting of

hydrogen,

halogen,

hydroxy,

cyano,

C_{1-10} alkyl, wherein alkyl is unsubstituted or substituted with one to five substituents independently selected from halogen or hydroxy,

C_{1-10} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five substituents independently selected from halogen or hydroxy,

C_{1-10} alkylthio, wherein alkylthio is unsubstituted or substituted with one to five substituents independently selected from halogen or hydroxy,

C_{2-10} alkenyl, wherein alkenyl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, COOH, and $COOC_{1-6}$ alkyl,

$(CH_2)_nCOOH$,

$(CH_2)_nCOOC_{1-6}$ alkyl,

$(CH_2)_nCONR^4R^5$, wherein R^4 and R^5 are independently selected from the group consisting of hydrogen, tetrazolyl, thiazolyl, $(CH_2)_n$-phenyl, $(CH_2)_n$-C_{3-6} cycloalkyl, and C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens and wherein phenyl and cycloalkyl are unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens;
or R^4 and R^5 together with the nitrogen atom to which they are attached form a heterocyclic ring selected from azetidine, pyrrolidine, piperidine, piperazine, and morpholine wherein said heterocyclic ring is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens;

$(CH_2)_n$-NR^4R^5,

$(CH_2)_n$-$OCONR^4R^5$,

$(CH_2)_n$-$SO_2NR^4R^5$,

$(CH_2)_n$-SO_2R^6,

$(CH_2)_n$-$NR^7SO_2R^6$,

$(CH_2)_n$-$NR^7CONR^4R^5$,

$(CH_2)_n$-NR^7COR^7,

$(CH_2)_n$-$NR^7CO_2R^6$,

$(CH_2)_n$-COR^7,

$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, cyano, hydroxy, $NR^7SO_2R^6$, SO_2R^6, CO_2H, $COOC_{1-6}$ alkyl, C_{1-6} alkyl, and

C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-heteroaryl, wherein heteroaryl is unsubstituted or substituted with one to three substituents independently selected from hydroxy, halogen, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens, and

$(CH_2)_n$-heterocyclyl, wherein heterocyclyl is unsubstituted or substituted with one to three substituents independently selected from oxo, hydroxy, halogen, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

wherein any methylene (CH_2) carbon atom in R^1 is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens;

each R^2 is independently selected from the group consisting of

hydrogen,

C_{1-10} alkyl, wherein alkyl is unsubstituted or substituted with one to five substituents independently selected from halogen or hydroxy,

C_{2-10} alkenyl, wherein alkenyl is unsubstituted or substituted with one to five substituents independently selected from halogen or hydroxy,

$(CH_2)_nCOOH$,

$(CH_2)_nCOOC_{1-6}$ alkyl,

$(CH_2)_nCONR^4R^5$, wherein R^4 and R^5 are independently selected from the group consisting of hydrogen, tetrazolyl, thiazolyl, $(CH_2)_n$-phenyl, $(CH_2)_n$-C_{3-6} cycloalkyl, and C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens and wherein phenyl and cycloalkyl are unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens;
or R^4 and R^5 together with the nitrogen atom to which they are attached form a heterocyclic ring selected from azetidine, pyrrolidine, piperidine, piperazine, and morpholine wherein said heterocyclic ring is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, $(CH_2)_nCOOC_{1-6}$ alkyl, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens or one phenyl;

$(CH_2)_n$-COR^7,

$(CH_2)_n$-$SO_2NR^4R^5$,

$(CH_2)_n$-SO_2R^6,

$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, cyano, hydroxy, $NR^7SO_2R^6$, SO_2R^6, CO_2H, C_{1-6} alkyloxycarbonyl, C_{1-6} alkyl, and
C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-heteroaryl, wherein heteroaryl is unsubstituted or substituted with one to three substituents independently selected from hydroxy, halogen, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens, and

$(CH_2)_n$-heterocyclyl, wherein heterocyclyl is unsubstituted or substituted with one to three substituents independently selected from oxo, hydroxy, halogen, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

wherein any methylene (CH_2) carbon atom in R^2 is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens;

each R^3 is independently selected from the group consisting of

hydrogen,

halogen,

cyano,

hydroxy,

C_{1-6} alkyl, unsubstituted or substituted with one to five halogens, and

C_{1-6} alkoxy, unsubstituted or substituted with one to five halogens;

R^6 is independently selected from the group consisting of tetrazolyl, thiazolyl, $(CH_2)_n$-phenyl, $(CH_2)_n$-C_{3-6} cycloalkyl, and C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens and wherein phenyl and cycloalkyl are unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens, and wherein any methylene (CH_2) carbon atom in R^6 is unsubstituted or substituted with one to two groups independently selected from halogen,

hydroxy, C_{1-4} alkyl, and C_{1-4} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens;

each R^7 is hydrogen or R^6;

R^8, R^9 and R^{10} are each independently selected from the group consisting of

hydrogen,

cyano,

$(CH_2)_nCOOH$,

$(CH_2)_nCOOC_{1-6}$ alkyl,

C_{1-6} alkyloxycarbonyl,

C_{1-10} alkyl, unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkoxy, and phenyl-C_{1-3} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-heteroaryl, wherein heteroaryl is unsubstituted or substituted with one to three substituents independently selected from hydroxy, halogen, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-heterocyclyl, wherein heterocyclyl is unsubstituted or substituted with one to three substituents independently selected from oxo, hydroxy, halogen, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

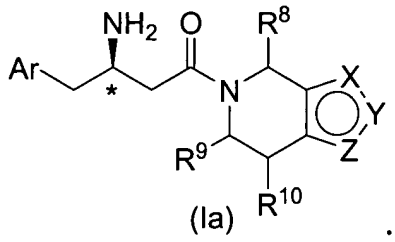
$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens, and

$(CH_2)_nCONR^4R^5$, wherein R^4 and R^5 are independently selected from the group consisting of hydrogen, tetrazolyl, thiazolyl, $(CH_2)_n$-phenyl, $(CH_2)_n$-C_{3-6} cycloalkyl, and C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens and wherein phenyl and cycloalkyl are unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens;
or R^4 and R^5 together with the nitrogen atom to which they are attached form a heterocyclic ring selected from azetidine, pyrrolidine, piperidine, piperazine, and

morpholine wherein said heterocyclic ring is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, $(CH_2)_nCOOC_{1-6}$ alkyl, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens or one phenyl; and

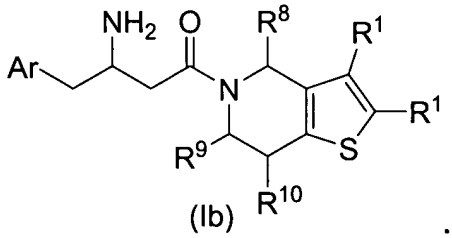
wherein any methylene (CH_2) carbon atom in R^8, R^9 or R^{10} is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens.

2. (original) The compound of Claim 1 of the structural formula Ia wherein the carbon atom marked with an * has the *R* stereochemical configuration



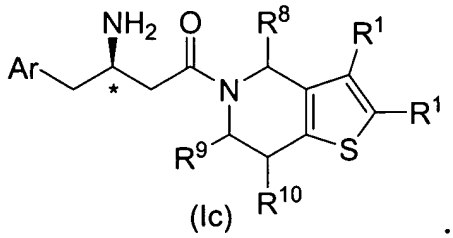
(Ia)

3. (original) The compound of Claim 1 of the structural formula Ib



(Ib)

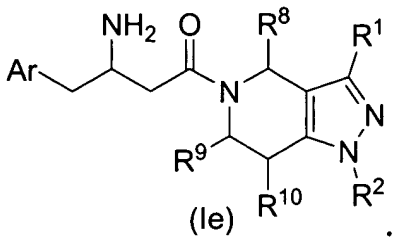
4. (original) The compound of Claim 3 of the structural formula Ic wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Ic)

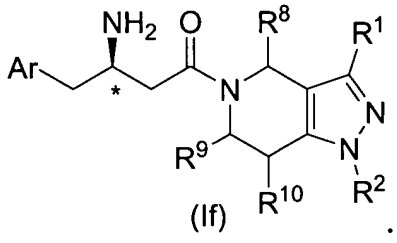
5. (original) The compound of Claim 3 wherein R^9 and R^{10} are hydrogen.

6. (original) The compound of Claim 1 of the structural formula Ie



(Ie)

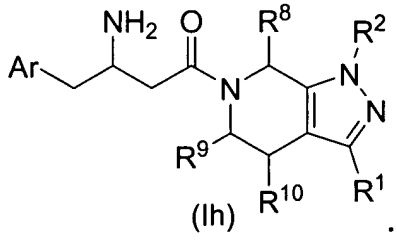
7. (original) The compound of Claim 6 of the structural formula If wherein the carbon atom marked with an * has the *R* stereochemical configuration



(If)

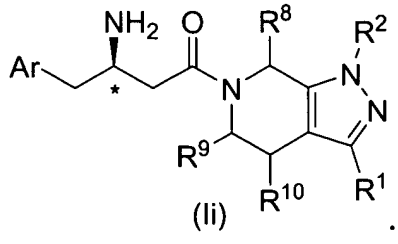
8. (original) The compound of Claim 6 wherein R^9 and R^{10} are hydrogen.

9. (original) The compound of Claim 1 of the structural formula Ih



(Ih)

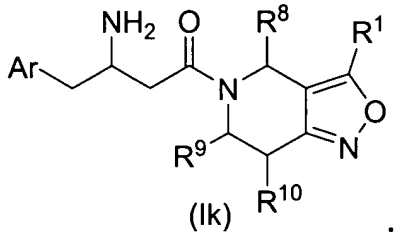
10. (original) The compound of Claim 9 of the structural formula Ii wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Ii)

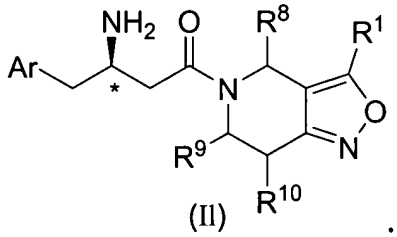
11. (original) The compound of Claim 9 wherein R^9 and R^{10} are hydrogen.

12. (original) The compound of Claim 1 of the structural formula Ik



(Ik)

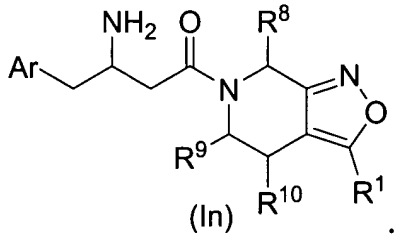
13. (original) The compound of Claim 12 of the structural formula Il wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Il)

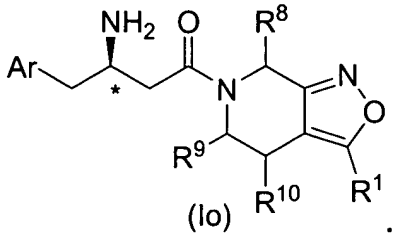
14. (original) The compound of Claim 12 wherein R^9 and R^{10} are hydrogen.

15. (original) The compound of Claim 1 of the structural formula In



(In)

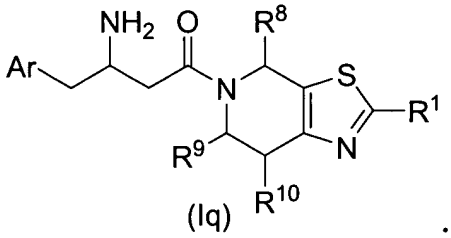
16. (original) The compound of Claim 15 of the structural formula Io wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Io)

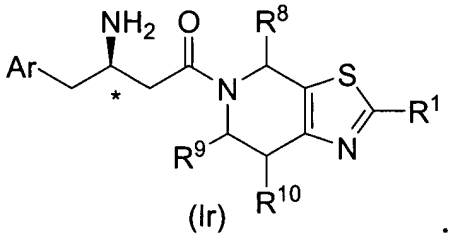
17. (original) The compound of Claim 15 wherein R^9 and R^{10} are hydrogen.

18. (original) The compound of Claim 1 of structural formula Iq



(Iq)

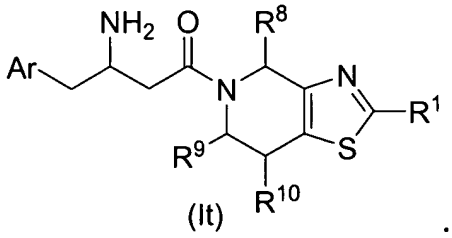
19. (original) The compound of Claim 18 of the structural formula Ir wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Ir)

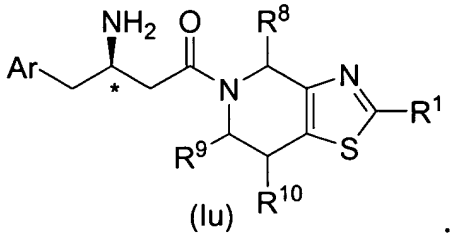
20. (original) The compound of Claim 18 wherein R^9 and R^{10} are hydrogen.

21. (original) The compound of Claim 1 of the structural formula It



(It)

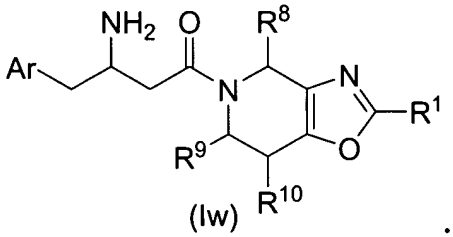
22. (original) The compound of Claim 21 of the structural formula Iu wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Iu)

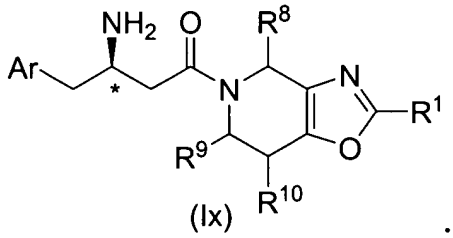
23. (original) The compound of Claim 21 wherein R^9 and R^{10} are hydrogen.

24. (original) The compound of Claim 1 of the structural formula Iw



(Iw)

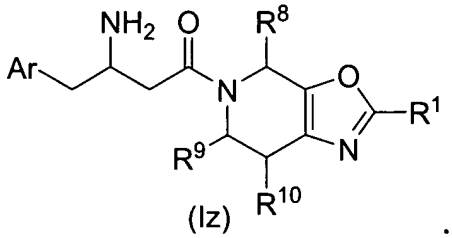
25. (original) The compound of Claim 24 of the structural formula Ix wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Ix)

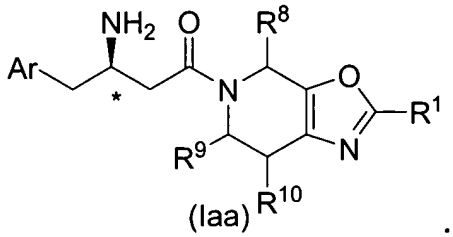
26. (original) The compound of Claim 24 wherein R^9 and R^{10} are hydrogen.

27. (original) The compound of Claim 1 of the structural formula Iz



(Iz)

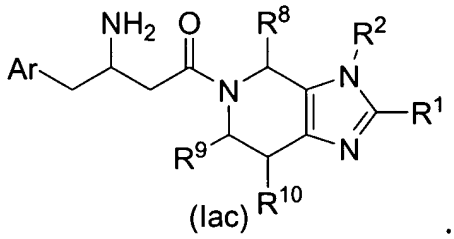
28. (original) The compound of Claim 27 of the structural formula Iaa wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Iaa)

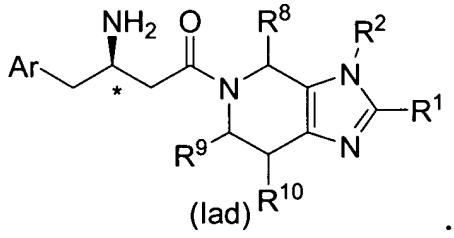
29. (original) The compound of Claim 27 wherein R^9 and R^{10} are hydrogen.

30. (original) The compound of Claim 1 of the structural formula Iac



(Iac)

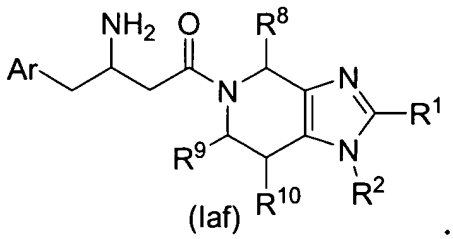
31. (original) The compound of Claim 30 of the structural formula Iad wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Iad)

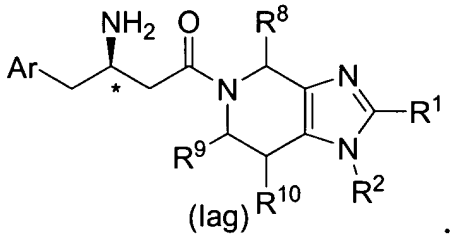
32. (original) The compound of Claim 30 wherein R^9 and R^{10} are hydrogen.

33. (original) The compound of Claim 1 of the structural formula Iaf



(Iaf)

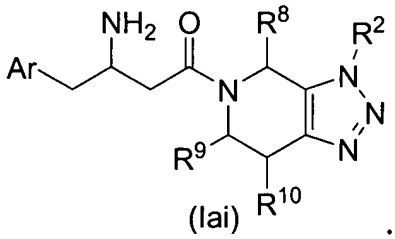
34. (original) The compound of Claim 33 of the structural formula Ig wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Iag)

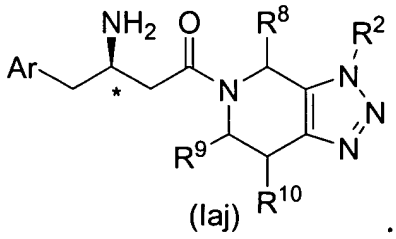
35. (original) The compound of Claim 33 wherein R^9 and R^{10} are hydrogen.

36. (original) The compound of Claim 1 of the structural formula Iai



(Iai)

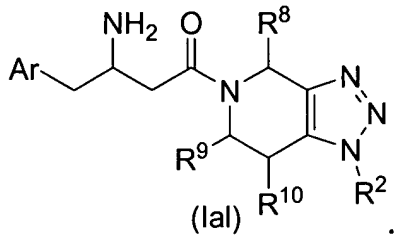
37. (original) The compound of Claim 36 of the structural formula Iaj wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Iaj)

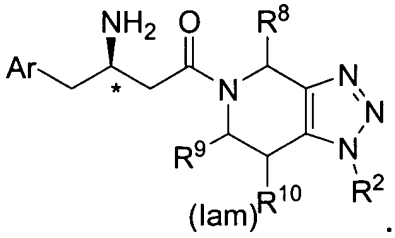
38. (original) The compound of Claim 36 wherein R^9 and R^{10} are hydrogen.

39. (original) The compound of Claim 1 of the structural formula Ial



(Ial)

40. (original) The compound of Claim 39 of the structural formula Iam wherein the carbon atom marked with an * has the *R* stereochemical configuration



(Iam)

41. (original) The compound of Claim 39 wherein R^9 and R^{10} are hydrogen.

42. (original) The compound of Claim 1 wherein R^3 is selected from the group consisting of hydrogen, fluoro, chloro, bromo, trifluoromethyl, and methyl.

43. (original) The compound of Claim 1 wherein R^1 is selected from the group consisting of:

hydrogen,

halogen,

hydroxy,

C_{1-10} alkyl, wherein alkyl is unsubstituted or substituted with one to five substituents independently selected from halogen or hydroxy,

C_{2-10} alkenyl, wherein alkenyl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, COOH, and $COOC_{1-6}$ alkyl,

$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens, and

$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, cyano, hydroxy, $NR^7SO_2R^6$, SO_2R^6, CO_2H, $COOC_{1-6}$ alkyl, C_{1-6} alkyl, and

C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; and

wherein any methylene (CH_2) carbon atom in R^1 is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens;

44. (original) The compound of Claim 43 wherein R^1 is selected from the group consisting of

hydrogen,
methyl,
ethyl,
trifluoromethyl,
CH_2CF_3,
CF_2CF_3,
phenyl,
4-(methoxycarbonyl)phenyl,
4-fluorophenyl,
4-(trifluoromethyl)phenyl,
4-(methylsulfonyl)phenyl,
cyclopropyl,
fluoro,
chloro,
bromo, and
2-(methoxycarbonyl)vinyl.

45. (original) The compound of Claim 1 wherein R^2 is selected from the group consisting of

hydrogen,
C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five substituents independently selected from halogen or hydroxy,
$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, CN, hydroxy, $NR^7SO_2R^6$, SO_2R^6, CO_2H,

$COOC_{1-6}$ alkyl, C_{1-6} alkyl, and

C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; and

wherein any methylene (CH_2) carbon atom in R^2 is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens.

46. (original) The compound of Claim 45 wherein R^2 is selected from the group consisting of:

hydrogen,

methyl,

CH_2CF_3,

isobutyl,

4-(trifluoromethyl)benzyl, and

4-fluorobenzyl.

47. (original) The compound of Claim 1 wherein R^8, R^9, and R^{10} are independently selected from the group consisting of:

hydrogen,

C_{1-10} alkyl, unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkoxy,

and phenyl-C_{1-3} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens, and

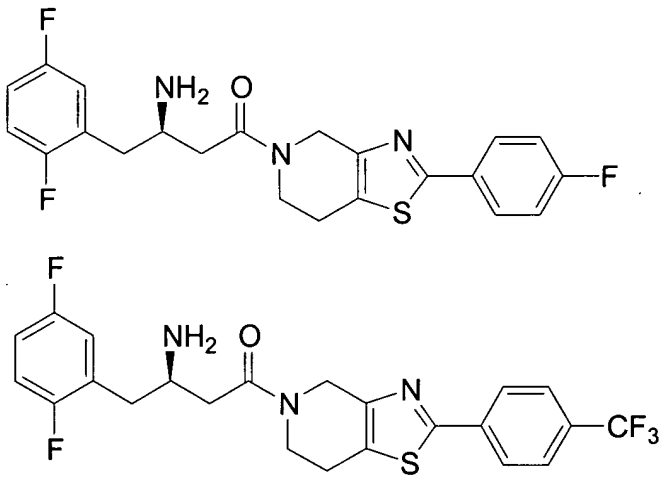
wherein any methylene (CH_2) carbon atom in R^8, R^9 or R^{10} is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens.

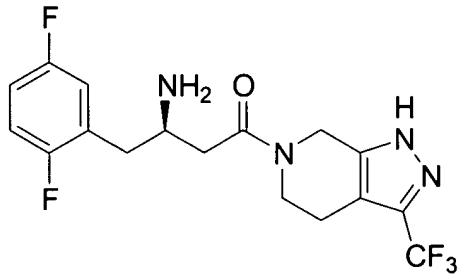
48. (original) The compound of Claim 47 wherein R^8, R^9, and R^{10} are each independently selected from the group consisting of

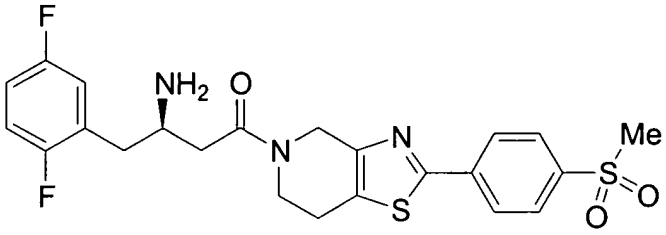
hydrogen,
trifluoromethyl,
methyl,
ethyl,
cyclopropyl,
CH_2-Ph, and
CH_2(4-F-Ph).

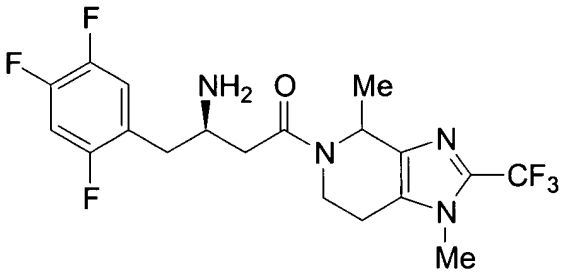
49. (original) The compound of Claim 48 wherein R^9 and R^{10} are hydrogen.

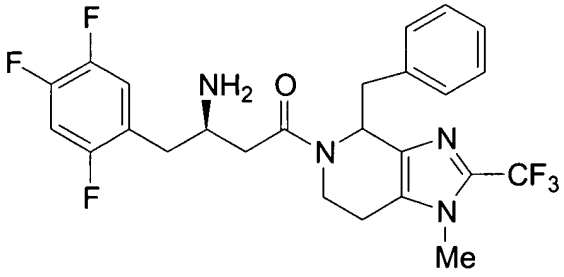
50. (original) The compound of Claim 49 which is selected from the group consisting of:

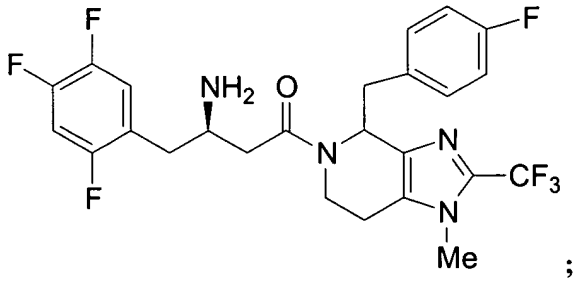












;

or a pharmaceutically acceptable salt thereof.

51. (original) A pharmaceutical composition which comprises a compound of Claim 1 and a pharmaceutically acceptable carrier.

52. (cancelled)

53. (new) A method for treating non-insulin dependent (Type 2) diabetes in a mammal in need thereof which comprises the administration to the mammal of a therapeutically effective amount of a compound of Claim 1.

54. (new) A method for treating hyperglycemia in a mammal in need thereof which comprises the administration to the mammal of a therapeutically effective amount of a compound of Claim 1.

55. (new) A method for treating obesity in a mammal in need thereof which comprises the administration to the mammal of a therapeutically effective amount of a compound of Claim 1.

56. (new) The pharmaceutical composition of Claim 51 further comprising one or more additional active ingredients selected from the group consisting of:

(a) a second dipeptidyl peptidase IV inhibitor;

(b) an insulin sensitizer selected from the group consisting of a PPARγ agonist, a PPARα/γ dual agonist, a PPARα agonist, a biguanide, and a protein tyrosine phosphatase-1B inhibitor;

(c) an insulin or insulin mimetic;

(d) a sulfonylurea or other insulin secretagogue;

(e) an α-glucosidase inhibitor;

(f) a glucagon receptor antagonist;

(g) GLP-1, a GLP-1 mimetic, or a GLP-1 receptor agonist;

(h) GIP, a GIP mimetic, or a GIP receptor agonist;

(i) PACAP, a PACAP mimetic, or a PACAP receptor agonist;

(j) a cholesterol lowering agent such as (i) HMG-CoA reductase inhibitor, (ii) sequestrant, (iii) nicotinyl alcohol, nicotinic acid or a salt thereof, (iv) PPARα agonist, (v) PPARα/γ dual agonist, (vi) inhibitor of cholesterol absorption, (vii) acyl CoA:cholesterol acyltransferase inhibitor, and (viii) anti-oxidant;

(k) a PPARδ agonist;

(l) an antiobesity compound;

(m) an ileal bile acid transporter inhibitor;

(n) an anti-inflammatory agent; and

(o) an antihypertensive agent.